



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,192	09/26/2001	Varun Singh	20661-801D1	2113

7590

07/15/2003

Roger L. Maxwell  
Jenkins & Gilchrist, A Professional Corporation  
Suite 3200  
1445 Ross Avenue  
Dallas, TX 75202-2799

EXAMINER

LEE, EUGENE

ART UNIT

PAPER NUMBER

2815

DATE MAILED: 07/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/964,192

Applicant(s)

SINGH ET AL.

Examiner

Eugene Lee

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 April 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,11 and 12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,11 and 12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/14/03 has been entered.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

3. Claims 1, 2, 11 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Baldwin et al. 238 B2. Baldwin discloses (see, for example, column 3, line 62 until column 4, line 7) a polysilicon resistor with opposite temperature coefficients (TCRs). More specifically, in column 4, lines 4-5, Baldwin states a positive head TCR1 and a negative body TCR1.

Art Unit: 2815

Regarding the limitations “doping concentrations of  $\sim 6 \times 10^{19} \text{cm}^{-3}$  to  $\sim 1 \times 10^{20} \text{cm}^{-3}$ , less than  $\sim 3.75 \times 10^{20} \text{cm}^{-3}$ , greater than  $\sim 6 \times 10^{19} \text{cm}^{-3}$ ” stated in claims 1, 2, 11 respectively, see column 4, lines 10-13 wherein Baldwin discloses the doping concentration as  $9 \times 10^{19} \text{cm}^{-3}$  to  $3.2 \times 10^{20} \text{cm}^{-3}$ .

Regarding the limitation “wherein said resistor resistance is electronically trimmed”, this is a process limitation that does not add any structural limitations to the stated claims. Also see Product-by-Process Limitations paragraph below.

4. Claims 1, 2, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Isobe et al. ‘559. Isobe discloses (see, for example, column 1, lines 46-52) a polycrystalline silicon resistor containing a first impurity having a negative value of a temperature coefficient and of the polycrystalline silicon resistor, and a second impurity having a positive value of a temperature coefficient of the polycrystalline silicon resistor.

Regarding the limitations “doping concentrations of  $\sim 6 \times 10^{19} \text{cm}^{-3}$  to  $\sim 1 \times 10^{20} \text{cm}^{-3}$ , less than  $\sim 3.75 \times 10^{20} \text{cm}^{-3}$ , greater than  $\sim 6 \times 10^{19} \text{cm}^{-3}$ ” stated in claims 1, 2, 11 respectively, Isobe discloses (see, for example, column 1, lines 63 until column 2, lines 2) doping concentrations of  $2.7 \times 10^{20} \text{cm}^{-3}$  and  $2.3 \times 10^{19}$  to  $4.5 \times 10^{19} \text{cm}^{-3}$ .

Also see Product-by-Process Limitations paragraph below.

Art Unit: 2815

***Prior Art***

5. The prior art of made of record and not relied upon is considered pertinent to applicant's disclosure. See, for example, Kapoor '511 wherein Kapoor explains (see column 1, lines 57-\*) temperature coefficients.

**Product-by-Process Limitations**

6. While not objectionable, the Office reminds Applicant that "product by process" limitations in claims drawn to structure are directed to the product, per se, no matter how actually made. *In re Hirao*, 190 USPQ 15 at 17 (footnote 3). See also, *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessmann*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wethheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); *In re Marosi et al.*, 218 USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final product per se which must be determined in a "product by process" claim, and not the patentability of the process, and that an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or *otherwise*. Note that applicant has the burden of proof in such cases, as the above case law makes clear. Thus, no patentable weight will be given to those process steps which do not add structural limitations to the final product.

The limitation "resistor resistance is electronically trimmed" is a process limitation that produces a resistor, however, such a limitation does not add any structural limitations to the claims. Therefore, such language is given no patentable weight.

***Response to Arguments***

7. Applicant's arguments filed 4/14/03 have been fully considered but they are not persuasive. The new limitation "wherein said resistor resistance is electronically trimmed" is a process limitation that does not add any structural limitations to the claims. The presence of process limitations on product claims, which product does not otherwise distinguish over prior art, can not impart patentability to the product.

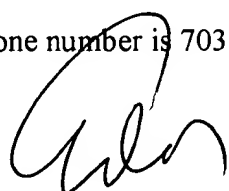
**INFORMATION ON HOW TO CONTACT THE USPTO**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eugene Lee whose telephone number is 703-305-5695. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie C. Lee can be reached on 703-308-1690. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Eugene Lee  
July 10, 2003



EDDIE LEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800